

FIG. 1

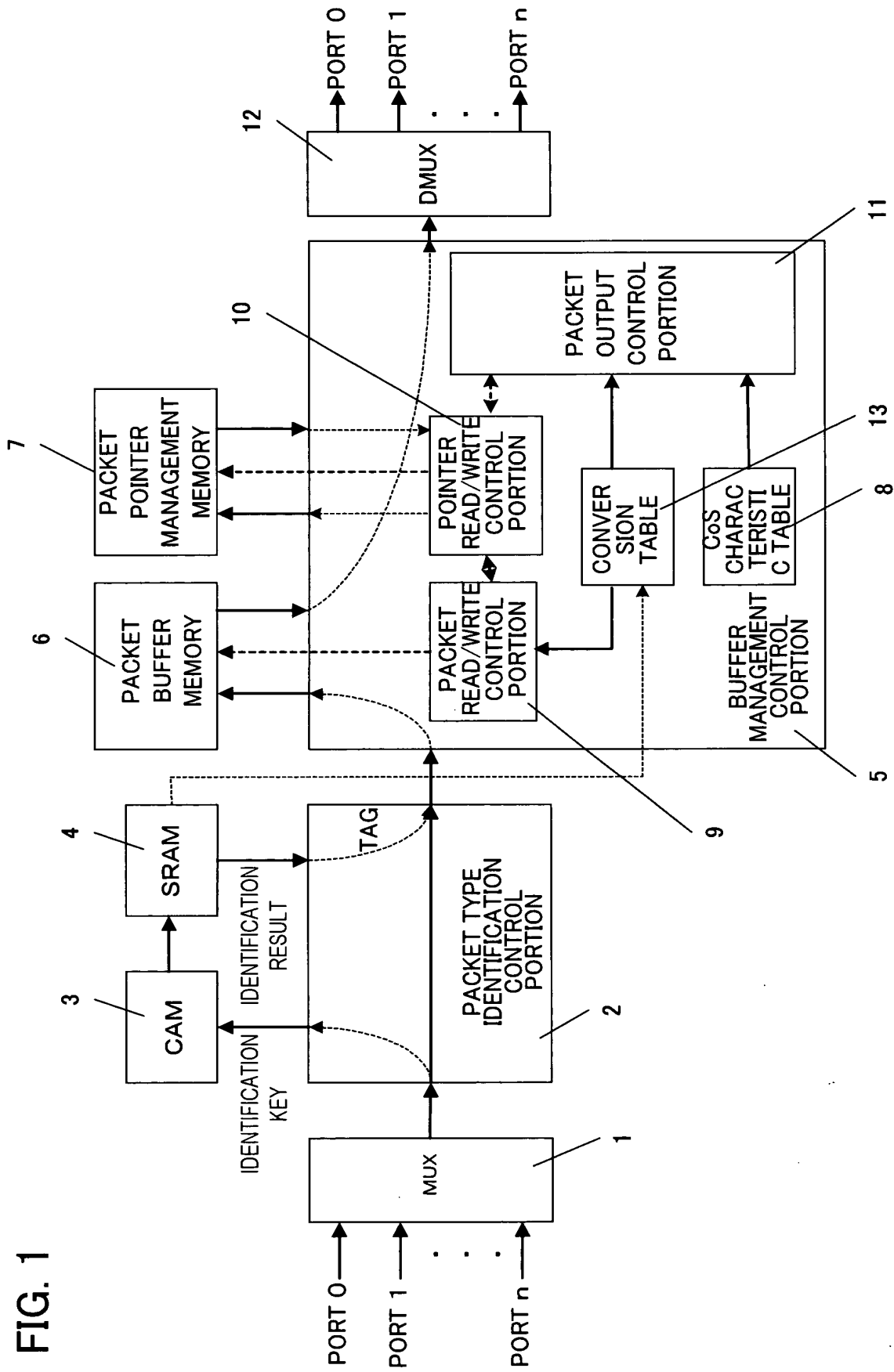


FIG. 2A

I	CAM	
	IP ADDR	PORT NUMBER
	IP ADDR	PORT NUMBER
	IP ADDR	PORT NUMBER
		~
IP ADDR		PORT NUMBER



FIG. 2B

I	SRAM	
	CoS CHARACTERISTIC No.	INPUT PHYSICAL PORT
	CoS CHARACTERISTIC NUMBER	INPUT PHYSICAL PORT
	CoS CHARACTERISTIC NUMBER	INPUT PHYSICAL PORT
		~
CoS CHARACTERISTIC NUMBER		INPUT PHYSICAL PORT
		OUTPUT PHYSICAL PORT
		OUTPUT PHYSICAL PORT
		OUTPUT PHYSICAL PORT
		CoS AREA
		CoS AREA
		CoS AREA
		~
CoS CHARACTERISTIC NUMBER		INPUT PHYSICAL PORT
		OUTPUT PHYSICAL PORT
		OUTPUT PHYSICAL PORT
		CoS AREA

DIAGRAM OF CAM AND SRAM DATA CONFIGURATION

FIG. 3

	(1)	(2)	(3)	(4)	(5)
0	OUTPUT PORT	OUTPUT PORT CoS NUMBER	START ADDRESS	END ADDRESS	CoS CHARACTERISTIC NUMBER
1	OUTPUT PORT	OUTPUT PORT CoS NUMBER	START ADDRESS	END ADDRESS	CoS CHARACTERISTIC NUMBER
2	OUTPUT PORT	OUTPUT PORT CoS NUMBER	START ADDRESS	END ADDRESS	CoS CHARACTERISTIC NUMBER
:	}				
M	OUTPUT PORT	OUTPUT PORT CoS NUMBER	START ADDRESS	END ADDRESS	CoS CHARACTERISTIC NUMBER

CONVERSION TABLE

FIG. 4

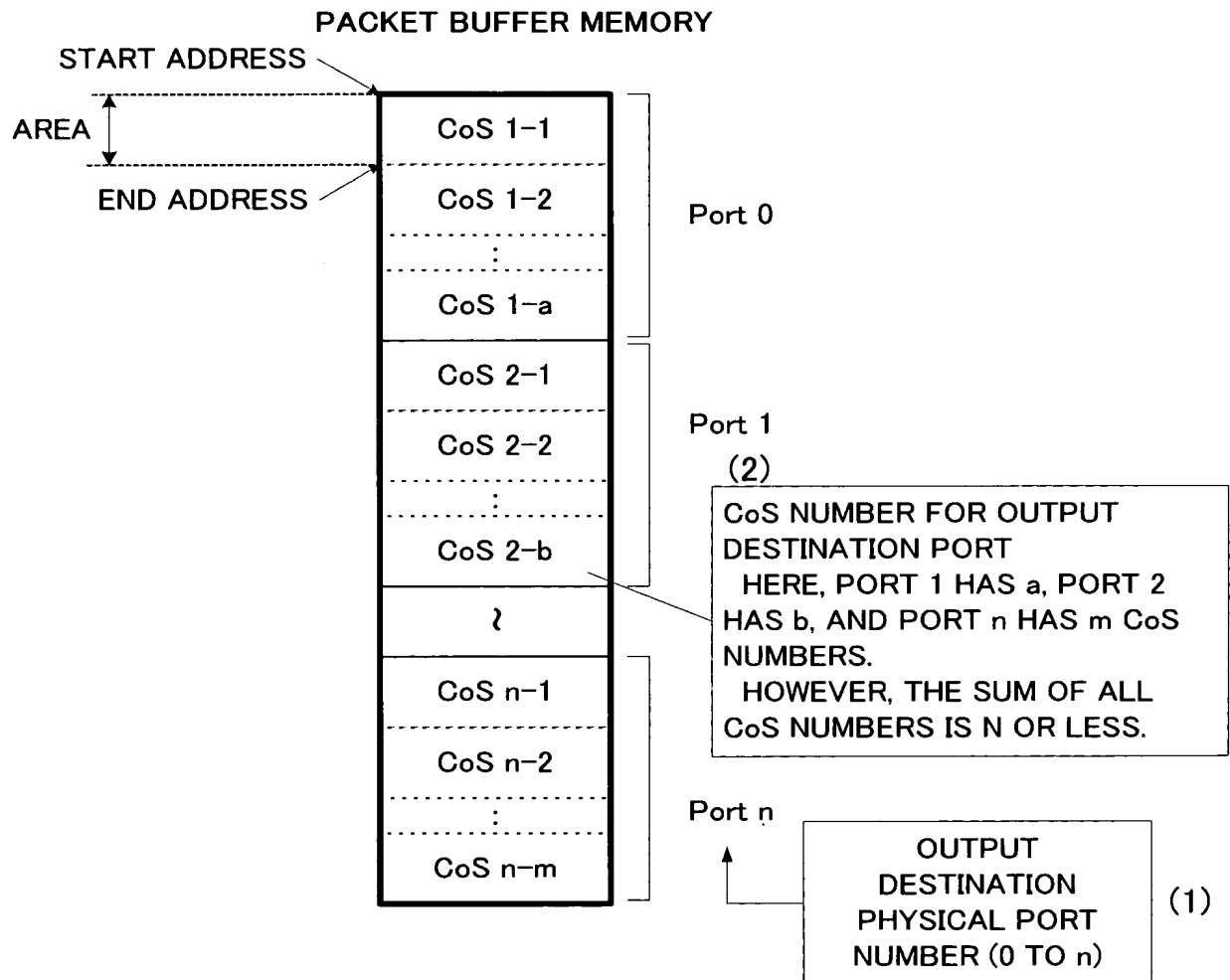


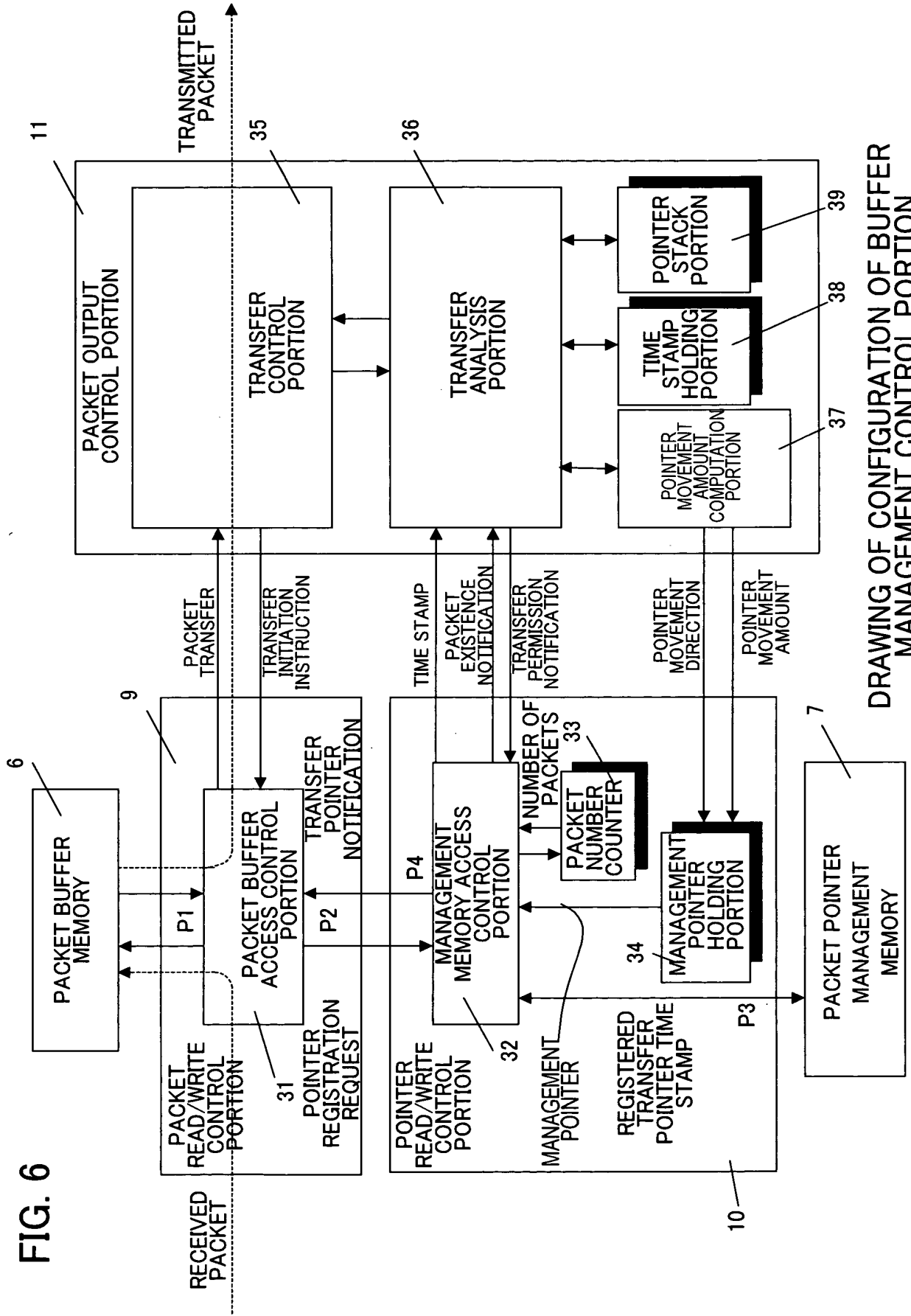
DIAGRAM OF PACKET BUFFER
CONFIGURATION

FIG. 5

0	CHARACTERISTIC CONTENTS (LOSS/ERROR INSERTION/DELAY INSERTION/REROUTING ETC)
1	CHARACTERISTIC CONTENTS (LOSS/ERROR INSERTION/DELAY INSERTION/REROUTING ETC)
2	CHARACTERISTIC CONTENTS (LOSS/ERROR INSERTION/DELAY INSERTION/REROUTING ETC)
:	~
M	CHARACTERISTIC CONTENTS (LOSS/ERROR INSERTION/DELAY INSERTION/REROUTING ETC)

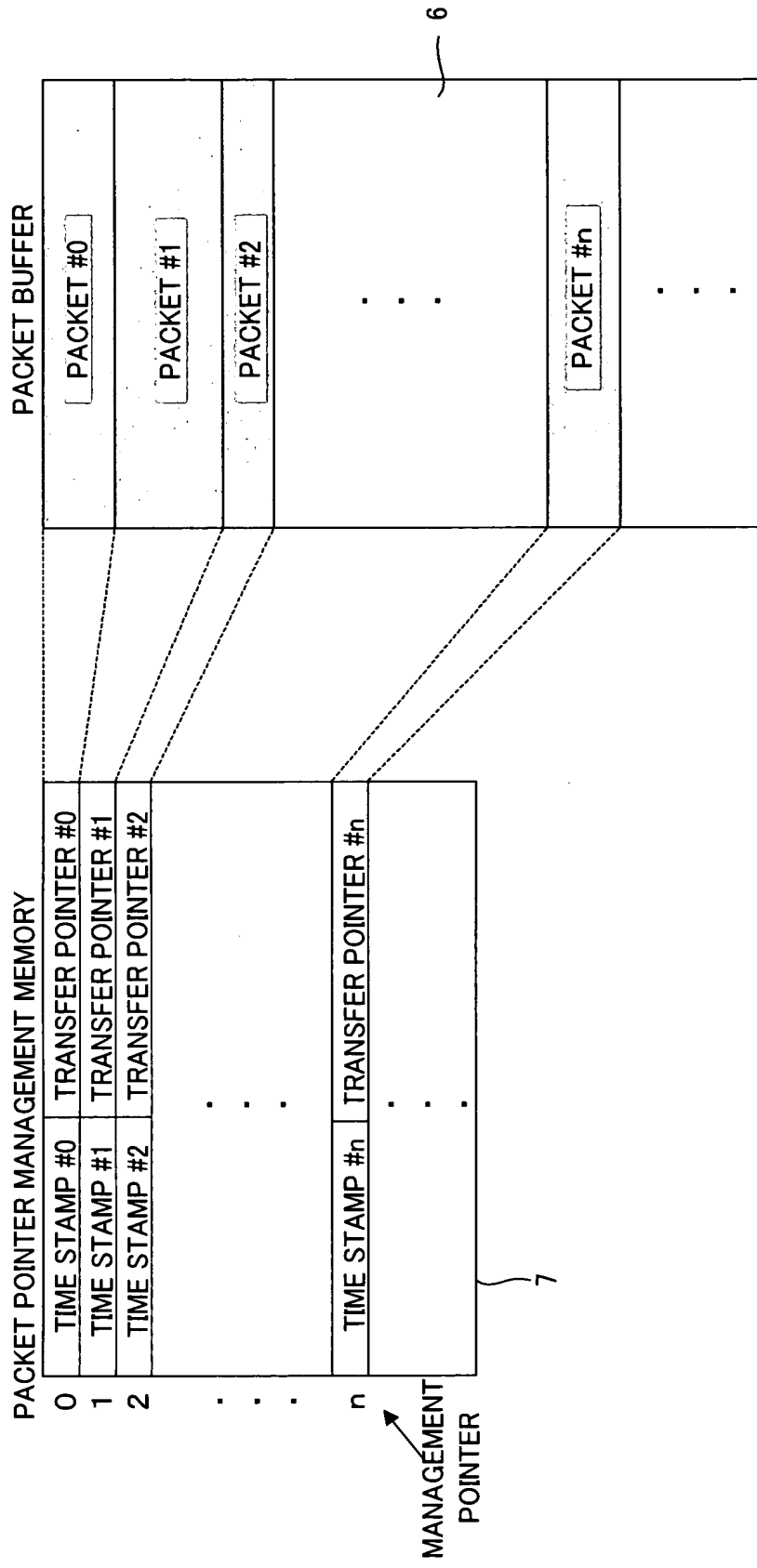
CoS CHARACTERISTIC TABLE

FIG. 6



DRAWING OF CONFIGURATION OF BUFFER MANAGEMENT CONTROL PORTION

FIG. 7



RELATION BETWEEN POINTER MANAGEMENT
MEMORY AND PACKET BUFFER

FIG. 8

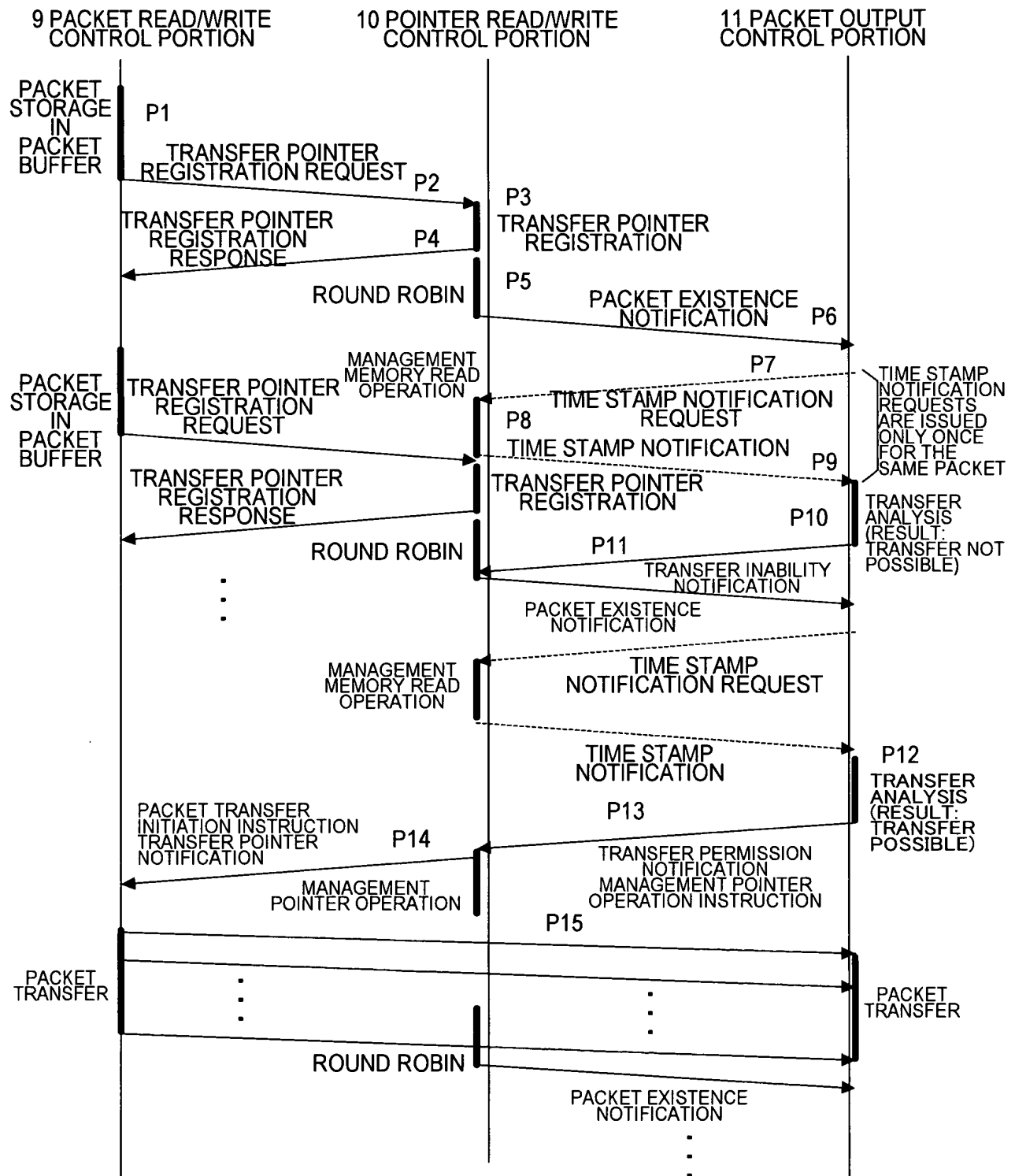
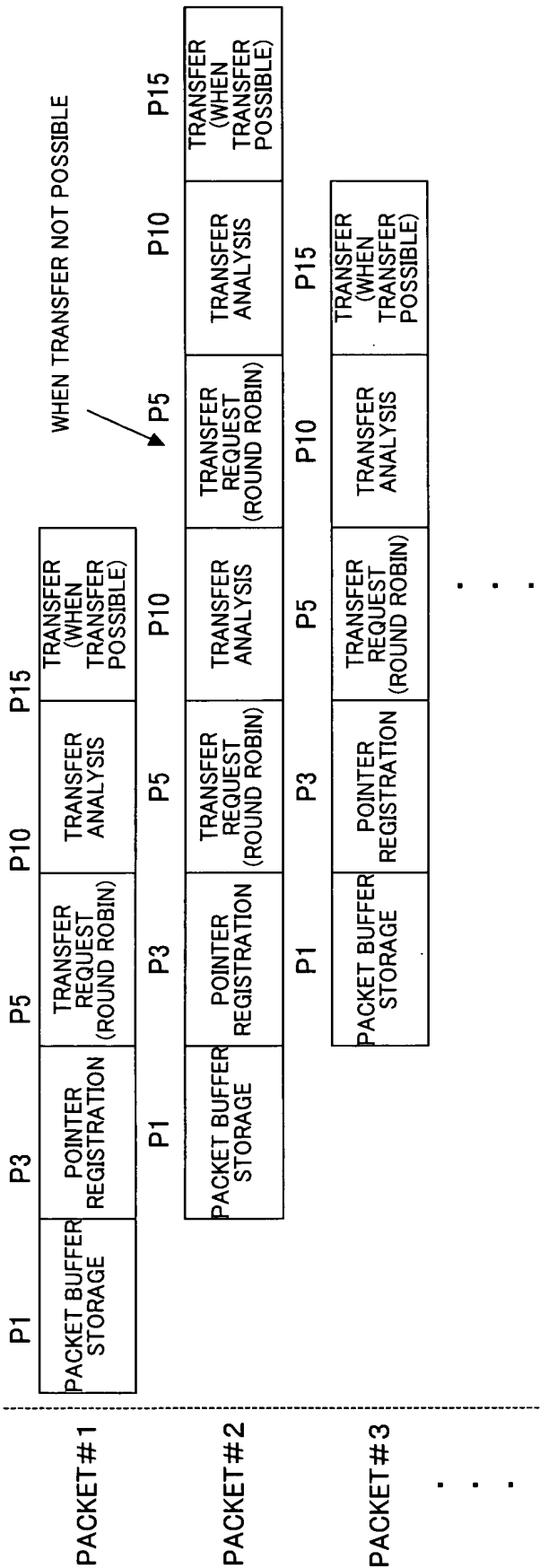
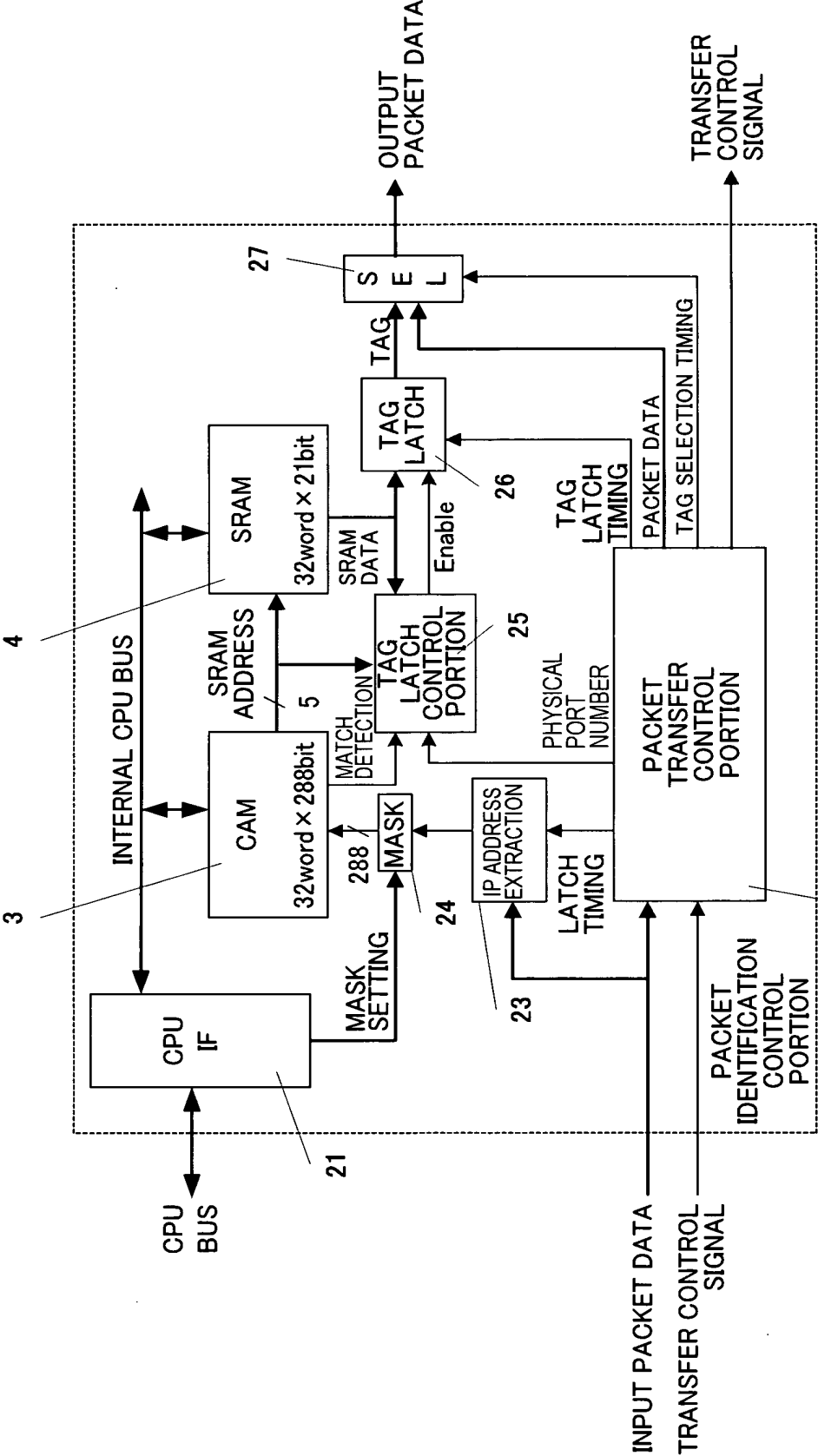


FIG. 9



PARALLEL PROCESSING OF BUFFER
MANAGEMENT CONTROL

FIG. 10



22
DETAILED BLOCK DIAGRAM OF PACKET IDENTIFICATION
CONTROL PORTION IN ONE EMBODIMENT

FIG. 11A

CAM		256 BITS	32 BITS
ADDRESS	IP ADDRESS	TCP/UDP PORT NO.	
0	IP ADDRESS 1	PORT NUMBER 1	
1	IP ADDRESS 2	PORT NUMBER 2	
2	IP ADDRESS 3	PORT NUMBER 3	
3	IP ADDRESS 4	PORT NUMBER 4	
4	IP ADDRESS 5	PORT NUMBER 5	
5	IP ADDRESS 6	PORT NUMBER 6	
6	IP ADDRESS 7	PORT NUMBER 7	
7	IP ADDRESS 8	PORT NUMBER 8	
8	IP ADDRESS 9	PORT NUMBER 9	
9	IP ADDRESS 10	PORT NUMBER 10	
10	IP ADDRESS 11	PORT NUMBER 11	
11	IP ADDRESS 12	PORT NUMBER 12	
12	IP ADDRESS 13	PORT NUMBER 13	
13	IP ADDRESS 14	PORT NUMBER 14	
14	IP ADDRESS 15	PORT NUMBER 15	
15	IP ADDRESS 16	PORT NUMBER 16	
16	IP ADDRESS 17	PORT NUMBER 17	
17	IP ADDRESS 18	PORT NUMBER 18	
18	UNDEFINED		
:			
31			

FIG. 11B

SRAM										
1 BIT		6 BITS		4 BITS		4 BITS		6 BITS		
ADDRESS	EN BIT	CoS CHARACTERISTIC NUMBER	INPUT PHYSICAL PORT NUMBER	OUTPUT DESTINATION PHYSICAL PORT NUMBER	CoS AREA					
0	1	0	0	3	3					
1	1	1	0	3	1					
2	1	2	0	3	2					
3	1	3	0	4	1					
4	1	4	0	5	3					
5	1	5	1	6	1					
6	1	6	1	7	3					
7	1	7	3	0	1					
8	1	7	3	0	2					
9	1	7	3	4	4					
10	1	8	4	1	1					
11	1	9	4	1	4					
12	1	10	4	6	1					
13	1	11	4	6	1					
14	1	12	5	1	1					
15	1	13	6	1	1					
16	1	14	7	4	1					
17	1	15	7	7	1					
18	0	UNDEFINED								
:										
31	0									

OF THE 32 TYPES, CHARACTERISTICS

TOTAL 32

INDICATES VALIDITY OF SET CONTENTS

OF THE 32 TYPES, CHARACTERISTICS TOTAL 32
INDICATES VALIDITY OF SET CONTENTS

CONTENTS OF CAM AND SRAM DATA IN ONE EMBODIMENT

FIG. 12A

FIG. 12B

(a) SMALLEST PARTITIONS OF CoS AREAS (b) ACTUAL ALLOCATION FOR SRAM SETTINGS

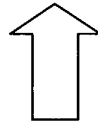
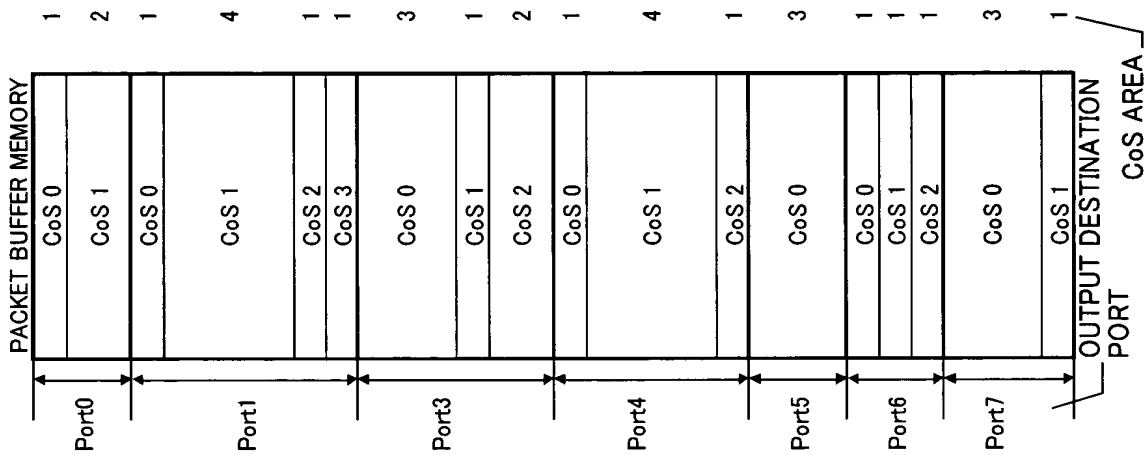
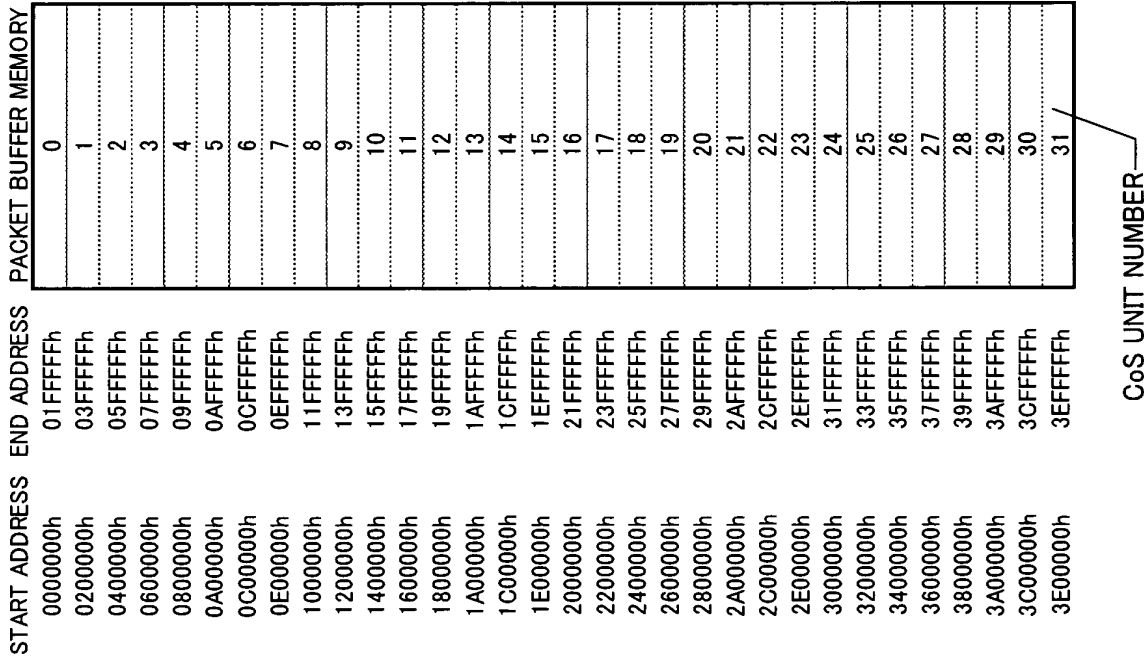


DIAGRAM OF ALLOCATION OF PACKET BUFFER MEMORY IN ONE EMBODIMENT

FIG. 13

No.	PACKET LOSS		ERROR INSERTION		PACKET DUPLICATION		DELAY INSERTION	
	EN	LOS FRACTION	EN	ERROR RATE	EN	DUPLICATION RATE	EN	DELAY TIME
0	0	-	0	-	0	-	1	100ms
1	0	-	0	-	0	-	1	1ms
2	0	-	0	-	0	-	1	50ms
3	0	-	1	10%	0	-	0	-
4	0	-	1	20%	0	-	1	100ms
5	0	-	1	30%	0	-	1	1ms
6	0	-	1	40%	0	-	1	300ms
7	0	-	1	50%	1	10%	1	1ms
8	0	-	1	50%	1	10%	0	-
9	1	10%	1	50%	1	10%	1	800ms
10	1	10%	1	50%	1	20%	0	-
11	1	10%	0	-	1	20%	0	-
12	1	20%	0	-	1	20%	0	-
13	1	20%	1	10%	1	20%	0	-
14	1	20%	1	20%	1	30%	0	-
15	1	20%	0	-	0	-	0	-
16	UNDEFINED							
.								
31								

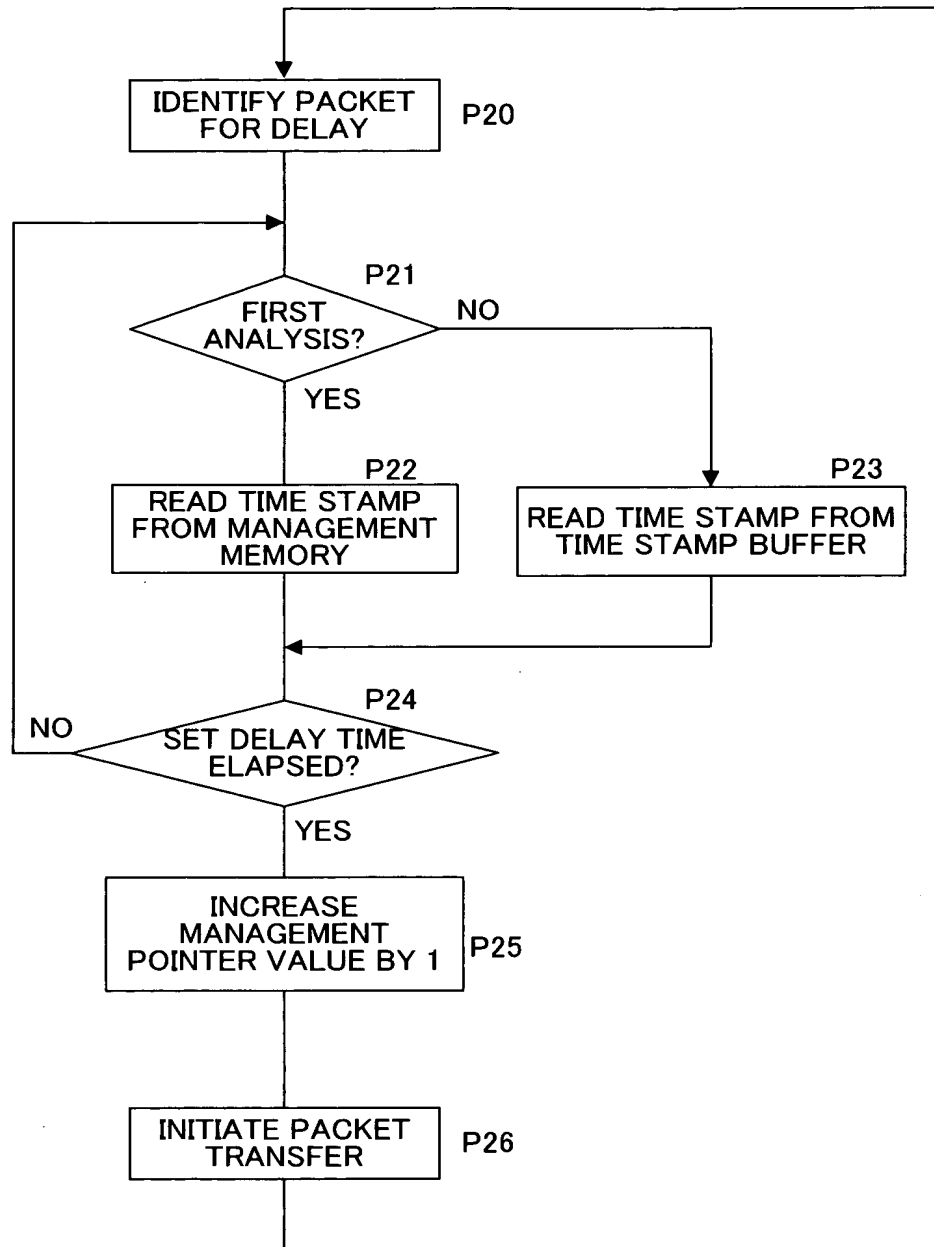
CONTENTS OF CoS CHARACTERISTIC TABLE IN ONE EMBODIMENT

FIG. 14

No.	OUTPUT DESTINATION PHYSICAL PORT NUMBER	DEQ CoS NUMBER	START ADDRESS	END ADDRESS	CoS CHARACTERISTIC NUMBER
0	0	0	0000000h	01FFFFFFh	7
1	0	1	0200000h	05FFFFFFh	7
2	1	0	0600000h	07FFFFFFh	8
3	1	1	0800000h	0EFFFFFFh	9
4	1	2	1000000h	11FFFFFFh	12
5	1	3	1200000h	13FFFFFFh	13
6	3	0	1400000h	19FFFFFFh	0
7	3	1	1A00000h	1AFFFFFFh	1
8	3	2	1C00000h	1EFFFFFFh	2
9	4	0	2000000h	21FFFFFFh	3
10	4	1	2200000h	29FFFFFFh	7
11	4	2	2A00000h	2AFFFFFFh	14
12	5	0	2C00000h	31FFFFFFh	4
13	6	0	3200000h	33FFFFFFh	5
14	6	1	3400000h	35FFFFFFh	10
15	6	2	3600000h	37FFFFFFh	11
16	7	0	3800000h	3CFFFFFFh	6
17	7	1	3E00000h	3EFFFFFFh	15
18	UNDEFINED				
.					
31					

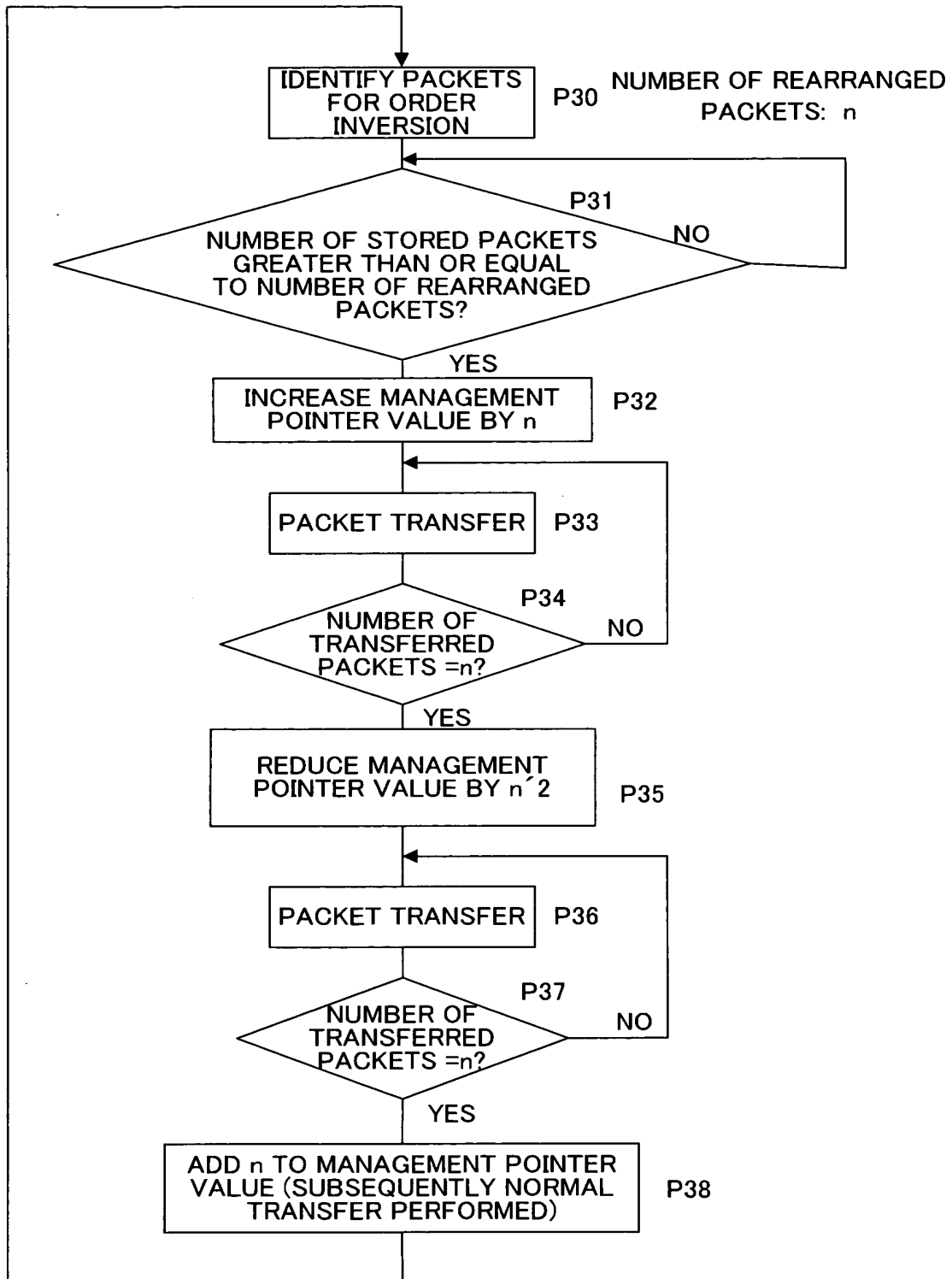
CONTENTS OF CONVERSION TABLE IN ONE EMBODIMENT

FIG. 15



FLOWCHART OF OPERATIONS IN PACKET DELAY

FIG. 16



FLOWCHART OF OPERATIONS IN PACKET ORDER INVERSION/
REROUTING

FIG. 17

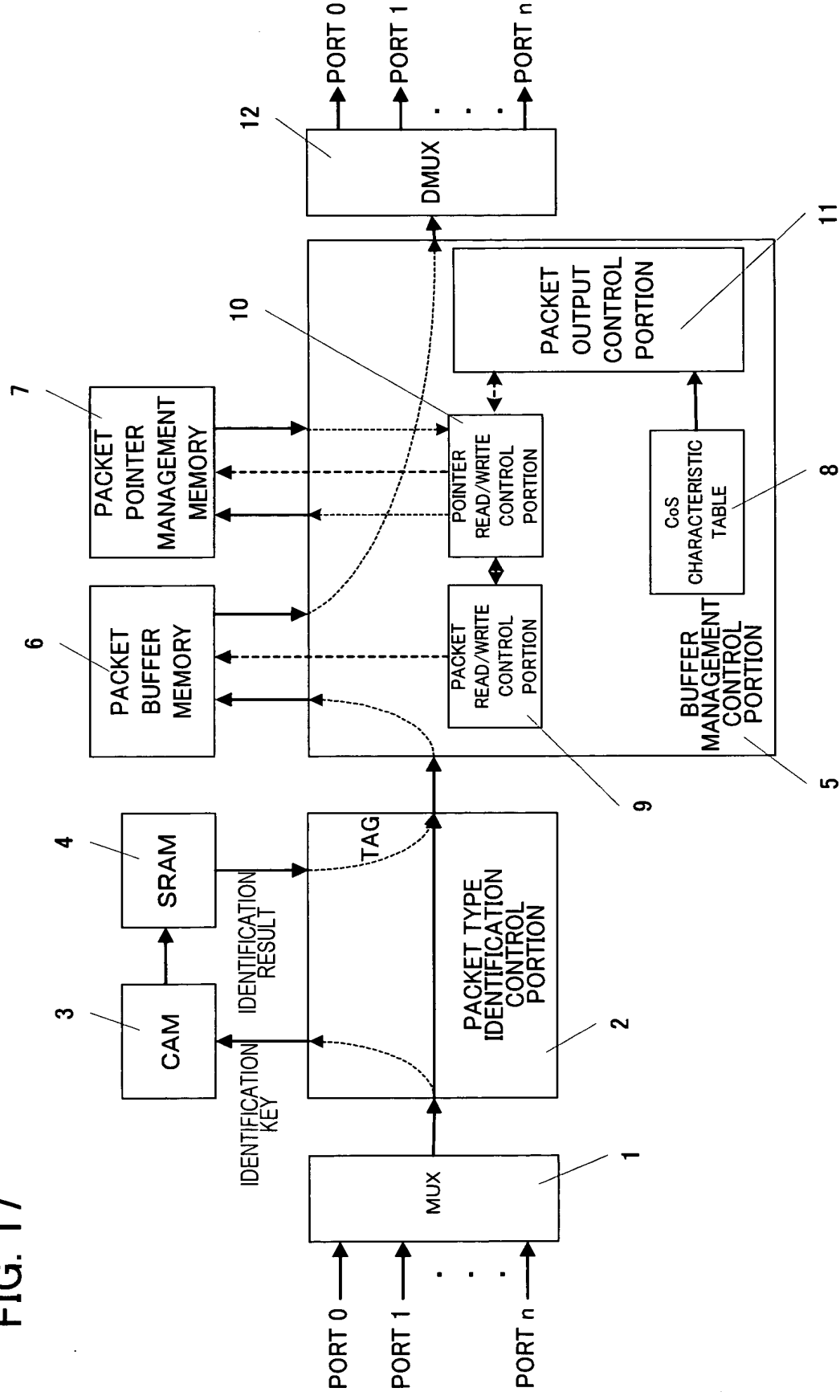
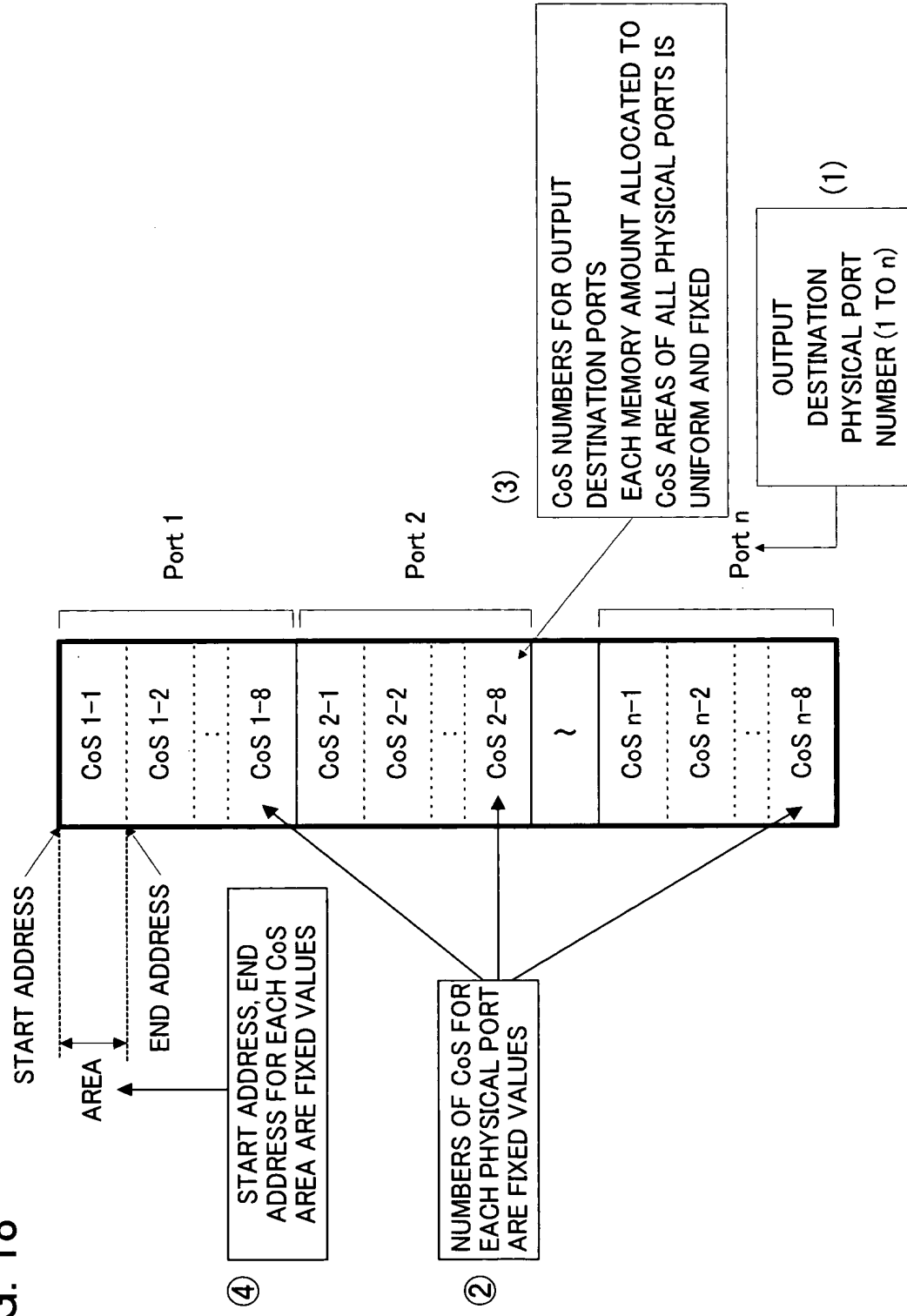


FIG. 18



PRIOR ART